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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/997,450	11/30/2001	Shamim M. Malik	50623.061	3442
45159	7590	01/22/2008		
SQUIRE, SANDERS & DEMPSEY LLP 1 MARITIME PLAZA SUITE 300 SAN FRANCISCO, CA 94111			EXAMINER SEVERSON, RYAN J	
			ART UNIT 3731	PAPER NUMBER
			MAIL DATE 01/22/2008	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

Application No.

09/997,450

Applicant(s)

MALIK ET AL.

Examiner

Ryan Severson

Art Unit

3731

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 06 November 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-10, 13-19 and 21-45 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-10, 13-19 and 21-45 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 March 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- ☐ Notice of Informal Patent Application
- ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. **Claims 1-10, 13-19, and 21-45 rejected under 35 U.S.C. 103(a) as being unpatentable over Lazarov et al. (6,110,204) in view of Shimida (JP11-313884).**

Lazarov et al. (hereinafter Lazarov) reference discloses the titanium-nitride-oxide ( $\text{TiN}_x\text{O}_y$ ) compound disposed about a stent substrate substantially as claimed.

However, Lazarov reference does not disclose the compound is implanted on a molecular or atomic level at a depth in the surface of the stent. Attention is drawn to Shimida reference, which teaches a stent can have a coating material implanted at a depth within the surface of the stent (see figure 1) to reduce the probability of the coating from peeling off the stent, thereby providing an improvement over a stent with a standard coating applied on its surface. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to implant the coating of Lazarov at a depth within the surface of the stent, as taught by Shimida, to reduce the probability of the coating from peeling off the stent.

3. Regarding claims 7, 17, 24, and 40, the use of stainless steel as a stent is well-known in the art, and is evidenced by applicants admission that stainless steel is commonly used for stents (see the last sentence of paragraph 13 of applicant's disclosure). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to make the stent of Lazarov of stainless steel to provide a stent that is inexpensive to manufacture due to abundance of the material and it's ease of manufacturing and processing. Further, Shimida discloses a stent may be made of stainless steel (see paragraph 17 of Shimida).

4. Regarding claims 3, 6, 30, and 33, the thickness and depth of the coating or implanted layer is well-known in the art, and is evidenced by Kirkpatrick et al. (6,676,989) in column 3, lines 51-55 as pointed out by applicant. This depth gives an advantage of providing a secure bond between the coating layer and the stent substrate without destroying the structural integrity of the substrate. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to implant the compound of Lazarov in view of Shimida to a depth and thickness as claimed to provide a secure bond between the coating layer and the stent substrate without destroying the structural integrity of the substrate.

5. Regarding claims 34, 42, and 44, Lazarov does not disclose the use of the carbon compound as claimed. Attention is again drawn to Shimida reference, which teaches a carbon compound can be implanted into the stent substrate to increase the hardness of the coating, thereby increasing the wear resistance of the stent. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention

was made to use the carbide of Shimida to replace the oxide of Lazarov to increase the hardness of the coating, thereby increasing the wear resistance of the stent.

***Response to Arguments***

6. Applicant's arguments filed 06 November 2007 have been fully considered but they are not persuasive. Examiner reminds applicant that the *Graham v. Deere* inquiries are merely one way of showing obviousness, however this is not a strictly limiting and rigid test. As described in the previous action, when a known product (for example, the implant of Lazarov) is improved by a known process (for example, the process in Shimida of implanting the coating within the surface of the stent instead of applying it on the top of the surface), a novel product does *not* result.

7. In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

8. Applicant asserts that with respect to the third prong of *Graham v. Deere*, Examiner has made no findings. However, as described above, the *Graham v. Deere* test is only one of a number of ways to show obviousness. Applicant has provided no basis or *factual* information to rebut Examiner's case of obviousness beyond the argument against each reference individually.

9. To summarize, the only difference between applicant's claimed invention and the Lazarov reference, for example, is that the coating is implanted into the region of the

surface in the claimed invention and the coating is applied atop the surface in Lazarov reference. As taught by Shimida, it is known in the art to have coatings implanted into the depth of the surface instead of merely placed atop the surface. The fact that Shimida and Morra do not recognize the use of the specific materials as claimed, this does not preclude the art as being applied as proper teaching references. Again, were this the case, applicant would be attacking the references individually, and not as a whole as applied in the rejections under 35 U.S.C 103.

10. Further, applicant argues against the combinations because Lazarov specifies particular density ranges. However, there is no claim language regarding pore density, and Examiner has not relied upon modifying or teaching away from this pore density at any point during prosecution.

11. Further, applicant argues that Shimida has laminated layers, however, applicant has no such claim language precluding the use of laminated layers, and therefore this argument is also not persuasive.

### ***Conclusion***

12. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

13. A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

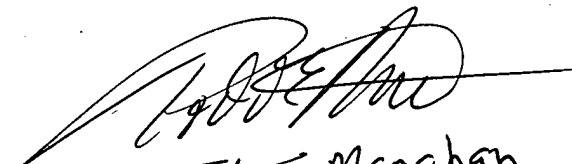
14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ryan Severson whose telephone number is (571) 272-3142. The examiner can normally be reached on Monday - Friday 9:00 - 5:30.

15. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Todd Manahan can be reached on (571) 272-4713. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

16. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

R.S.

Ryan Severson  
January 18, 2008

  
Todd E. Manahan  
SPE 3731